



238 087US Amended Seq Listing for 29 Sept 06 PTO comm .txt
SEQUENCE LISTING

<110> BEELEY, NIGEL ROBERT ARNOLD
PRICKETT, KATHRYN S.

<120> NOVEL EXENDIN AGONIST COMPOUNDS

<130> 238/087 US

<140> 09/554,531

<141> 2000-08-08

<150> PCT/US98/24273

<151> 1998-11-13

<150> 60/066,029

<151> 1997-11-14

<160> 110

<170> PatentIn Ver. 2.1

<210> 1

<211> 39

<212> PRT

<213> Heloderma horridum

<220>

<223> c-term amidation

<400> 1

His Ser Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 2

<211> 39

<212> PRT

<213> Heloderma suspectum

<220>

<223> c-term amidation

<400> 2

His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
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5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 3
<211> 30
<212> PRT
<213> Homo sapiens

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<223> c-term amidation

<400> 3
His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
1 5 10 15

Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
20 25 30

<210> 4
<211> 39
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist
formula peptide

<220>
<223> c-term may be amidated

<220>
<221> MOD_RES
<222> (1)
<223> His, Arg, Tyr, Ala, Norval, Val or Norleu

<220>
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<222> (2)
<223> Ser, Gly, Ala or Thr

<220>
<221> MOD_RES
<222> (3)
<223> Ala, Asp or Glu

<220>

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<222> (4)

<223> Ala, Norval, Val, Norleu or Gly

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<222> (5)

<223> Ala or Thr

<220>

<221> MOD_RES

<222> (6)

<223> Ala, Phe, Tyr or naphthylalanine

<220>

<221> MOD_RES

<222> (7)

<223> Thr or Ser

<220>

<221> MOD_RES

<222> (8)

<223> Ala, Ser or Thr

<220>

<221> MOD_RES

<222> (9)

<223> Ala, Norval, Val, Norleu, Asp or Glu

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<221> MOD_RES

<222> (10)

<223> Ala, Leu, Ile, Val, pentylglycine or Met

<220>

<221> MOD_RES

<222> (11)

<223> Ala or Ser

<220>

<221> MOD_RES

<222> (12)

<223> Ala or Lys

<220>

<221> MOD_RES

<222> (13)

<223> Ala or Gln

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<221> MOD_RES

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<222> (14)

<223> Ala, Leu, Ile, pentylglycine, Val or Met

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<221> MOD_RES

<222> (15)

<223> Ala or Glu

<220>

<221> MOD_RES

<222> (16)

<223> Ala or Glu

<220>

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<222> (17)

<223> Ala or Glu

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<222> (19)

<223> Ala or Val

<220>

<221> MOD_RES

<222> (20)

<223> Ala or Arg

<220>

<221> MOD_RES

<222> (21)

<223> Ala or Leu

<220>

<221> MOD_RES

<222> (22)

<223> Phe, Tyr or naphthylalanine

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<221> MOD_RES

<222> (23)

<223> Ile, Val, Leu, pentylglycine, tert-butylglycine or Met

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<221> MOD_RES

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<223> Ala, Glu or Asp

<220>

<221> MOD_RES

<222> (25)

<223> Ala, Trp, Phe, Tyr or naphthylalanine

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<222> (26)
<223> Ala or Leu

<220>
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<223> Ala or Lys

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<221> MOD_RES
<222> (28)
<223> Ala or Asn

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<222> (31)
<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline, N-alkylglycine
N-alkylpentylglycine or N-alkylalanine

<220>
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<222> (36)..(38)
<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline, N-alkylglycine
N-alkylpentylglycine or N-alkylalanine

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<222> (39)
<223> Ser or Tyr

<220>
<223> provided that no more than three of Xaa3, Xaa4, Xaa5, Xaa6,
Xaa8, Xaa9, Xaa10, Xaa11, Xaa12, Xaa13, Xaa14, Xaa15,
Xaa16, Xaa17, Xaa19, Xaa20, Xaa21, Xaa24, Xaa25, Xaa26,
Xaa27 and Xaa28 are Ala

<220>
<223> provided also that, if Xaa1 is His, Arg or Tyr, then at
least one of xaa3, Xaa4 and Xaa9 is Ala

<220>
<223> this peptide may encompass 28-39 residues, wherein residues
1-28 are constant and residues 29-39 may vary in length
according to the specification as filed; see specification for
detailed description of substitutions and preferred embodiments

<400> 4
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

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1 5 10 15

Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly Xaa Ser
20 25 30

Ser Gly Ala Xaa Xaa Xaa Xaa
35

<210> 5
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<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<400> 5
Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 6
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<400> 6
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 7
<211> 28
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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 7

His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
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<210> 8

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 8

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 9

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 9

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 10

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 10

His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
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<210> 11

<211> 28

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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 11

His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 12

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

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<223> c-term amidation

<400> 12

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
1 5 10 15

238 087US Amended Seq Listing for 29 Sept 06 PTO comm .txt
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 13
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<223> Description of Artificial Sequence: Exendin agonist

<220>
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<400> 13
His Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 14
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<220>
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<400> 14
Ala Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 15
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<220>
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<220>
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<400> 15

Ala Ala Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 16

<211> 28

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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 16

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 17

<211> 28

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 17

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 18

<211> 28

<212> PRT

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<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 18

Ala Gly Asp Gly Ala Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

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<211> 28

<212> PRT

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<220>

<223> c-term amidation

<400> 19

Ala Gly Asp Gly Ala Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 20

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<220>

<223> c-term amidation

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<223> naphthylalanine

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Ala Gly Asp Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
 20 25

<210> 21
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<220>
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<220>
 <223> c-term amidation

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 <222> (6)
 <223> naphthylalanine

<400> 21
 Ala Gly Asp Gly Thr Xaa Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
 20 25

<210> 22
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<220>
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<400> 22
 Ala Gly Asp Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
 20 25

<210> 23
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<220>

<223> c-term amidation

<400> 23

Ala Gly Asp Gly Thr Phe Ser Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 24

<211> 28

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<220>

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<400> 24

Ala Gly Asp Gly Thr Phe Thr Ala Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
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<210> 25

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<400> 25

Ala Gly Asp Gly Thr Phe Thr Ala Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 26
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<400> 26
Ala Gly Asp Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 27
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<220>
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<400> 27
Ala Gly Asp Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 28
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<220>
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<220>
<223> c-term amidation

<400> 28
Ala Gly Asp Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Met Glu Glu
Page 14

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 29
<211> 28
<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Exendin agonist

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<400> 29
Ala Gly Asp Gly Thr Phe Thr Ser Glu Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
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<212> PRT
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<400> 30
Ala Gly Asp Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 31
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<220>

<223> c-term amidation

<400> 31

Ala Gly Asp Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
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<210> 32

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<222> (10)

<223> pentlyglycine

<400> 32

Ala Gly Asp Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 33

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<213> Artificial Sequence

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<220>

<223> c-term amidation

<220>

<221> MOD_RES

<222> (10)

<223> pentlyglycine

<400> 33

Ala Gly Asp Gly Thr Phe Thr Ser Asp Xaa Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
 20 25

<210> 34
 <211> 28
 <212> PRT
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<220>
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<220>
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 Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ala Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
 20 25

<210> 35
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<220>
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<400> 35
 Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ala Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
 20 25

<210> 36
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<220>
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<400> 36

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Ala Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 37

<211> 28

<212> PRT

<213> Artificial Sequence

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<223> c-term amidation

<400> 37

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Ala Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 38

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<212> PRT

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<400> 38

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Ala Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 39

<211> 28

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 39

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Ala Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 40

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<400> 40

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 41

<211> 28

<212> PRT

<213> Artificial Sequence

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<223> c-term amidation

<400> 41

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Ala Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
Page 19

<210> 42
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<212> PRT
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<220>
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<220>
<223> c-term amidation

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<400> 42
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 43
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<400> 43
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Xaa Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 44

<211> 28

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<223> c-term amidation

<400> 44

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Ala Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 45

<211> 28

<212> PRT

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<400> 45

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Ala Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 46

<211> 28

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 46

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Ala
1 5 10 15

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Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 47
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<220>
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<400> 47
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Ala
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 48
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<223> Description of Artificial Sequence: Exendin agonist

<220>
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<400> 48
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Ala Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 49
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<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<400> 49

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Ala Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 50

<211> 28

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<400> 50

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Ala Arg Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 51

<211> 28

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Exendin agonist

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<223> c-term amidation

<400> 51

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Ala Arg Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 52

<211> 28

<212> PRT

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<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 52

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Ala Leu Phe Ile Glu Trp Leu Lys Asn
20 25

<210> 53

<211> 28

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<223> Description of Artificial Sequence: Exendin agonist

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<223> c-term amidation

<400> 53

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Ala Leu Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 54

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<223> Description of Artificial Sequence: Exendin agonist

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<223> c-term amidation

<400> 54

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Ala Phe Ile Glu Trp Leu Lys Asn
20 25

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<210> 55

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 55

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Ala Phe Ile Glu Phe Leu Lys Asn
20 25

<210> 56

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<220>

<221> MOD_RES

<222> (22)

<223> naphthylalanine

<400> 56

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Xaa Ile Glu Trp Leu Lys Asn
20 25

<210> 57

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<220>

<221> MOD_RES

<222> (22)

<223> naphthylalanine

<400> 57

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Xaa Ile Glu Phe Leu Lys Asn
20 25

<210> 58

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 58

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Val Glu Trp Leu Lys Asn
20 25

<210> 59

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 59

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Val Glu Phe Leu Lys Asn
20 25

<210> 60
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<220>
<221> MOD_RES
<222> (23)
<223> tert-butylglycine

<400> 60
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Xaa Glu Trp Leu Lys Asn
20 25

<210> 61
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<220>
<221> MOD_RES
<222> (23)
<223> tert-butylglycine

<400> 61
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Xaa Glu Phe Leu Lys Asn
20 25

<210> 62
<211> 28
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 62

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Asp Trp Leu Lys Asn
20 25

<210> 63

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 63

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Asp Phe Leu Lys Asn
20 25

<210> 64

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 64

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Asn
20 25

<210> 65
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<400> 65
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Ala Leu Lys Asn
20 25

<210> 66
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<400> 66
Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Ala Lys Asn
20 25

<210> 67
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<400> 67

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Ala Lys Asn
 20 25

<210> 68

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 68

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Ala Asn
 20 25

<210> 69

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 69

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
 1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Ala Asn
 20 25

<210> 70

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 70

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Ala
20 25

<210> 71

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 71

Ala Gly Asp Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Ala
20 25

<210> 72

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 72

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro
35

<210> 73
<211> 38
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<400> 73
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro Pro
35

<210> 74
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<400> 74
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15
Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30
Ser Gly Ala Pro Pro
35

<210> 75
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 75

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro
35

<210> 76

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 76

Ala Gly Glu Gly Thr Phe Thr Ser Asp Ala Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro
35

<210> 77

<211> 35

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 77

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

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Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala
35

<210> 78
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<400> 78
His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly

<210> 79
<211> 35
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<400> 79
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala

<210> 80
<211> 33

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 80

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser

<210> 81

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 81

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

<210> 82

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 82

His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
Page 35

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
20 25 30

<210> 83
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<400> 83
His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro
20 25 30

<210> 84
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<400> 84
His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly
20 25 30

<210> 85
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 85

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly
20 25

<210> 86

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<220>

<221> MOD_RES

<222> (31)

<223> thioproline

<220>

<221> MOD_RES

<222> (36)..(38)

<223> thioproline

<400> 86

His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
20 25 30

Ser Gly Ala Xaa Xaa Xaa
35

<210> 87

<211> 38

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<220>

<221> MOD_RES

<222> (36)..(38)

<223> thioproline

<400> 87

His Gly Glu Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Xaa Xaa Xaa
35

<210> 88

<211> 37

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<220>

<221> MOD_RES

<222> (31)

<223> N-methylalanine

<220>

<221> MOD_RES

<222> (36)..(37)

<223> N-methylalanine

<400> 88

His Gly Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
20 25 30

Ser Gly Ala Xaa Xaa
35

<210> 89

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<220>

<221> MOD_RES

<222> (31)

<223> homoproline

<220>

<221> MOD_RES

<222> (36)

<223> homoproline

<400> 89

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Xaa Ser
20 25 30

Ser Gly Ala Xaa
35

<210> 90

<211> 35

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 90

His Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala
35

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<210> 91

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 91

His Gly Asp Ala Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly
20 25 30

<210> 92

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 92

Ala Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 93

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<400> 93

Ala Gly Ala Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Leu Glu Glu
1 5 10 15

Glu Ala Val Arg Leu Phe Ile Glu Phe Leu Lys Asn Gly Gly Pro Ser
20 25 30

Ser Gly Ala Pro Pro Pro Ser
35

<210> 94

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist
formula peptide

<220>

<223> c-term may be amidated

<220>

<221> MOD_RES

<222> (1)

<223> His, Arg, Tyr, Ala, Norval, Val, Norleu or 4-imidazopropionyl

<220>

<221> MOD_RES

<222> (2)

<223> Ser, Gly, Ala or Thr

<220>

<221> MOD_RES

<222> (3)

<223> Ala, Asp or Glu

<220>

<221> MOD_RES

<222> (4)

<223> Ala, Norval, Val, Norleu or Gly

<220>

<221> MOD_RES

<222> (5)

<223> Ala or Thr

<220>

<221> MOD_RES

<222> (6)

<223> Phe, Tyr or naphthylalanine

<220>
<221> MOD_RES
<222> (7)
<223> Thr or Ser

<220>
<221> MOD_RES
<222> (8)
<223> Ala, Ser or Thr

<220>
<221> MOD_RES
<222> (9)
<223> Ala, Norval, Val, Norleu, Asp or Glu

<220>
<221> MOD_RES
<222> (10)
<223> Ala, Leu, Ile, Val, pentylglycine or Met

<220>
<221> MOD_RES
<222> (11)
<223> Ala or Ser

<220>
<221> MOD_RES
<222> (12)
<223> Ala or Lys

<220>
<221> MOD_RES
<222> (13)
<223> Ala or Gln

<220>
<221> MOD_RES
<222> (14)
<223> Ala, Leu, Ile, pentylglycine, Val or Met

<220>
<221> MOD_RES
<222> (15)
<223> Ala or Glu

<220>
<221> MOD_RES
<222> (16)
<223> Ala or Glu

<220>

<221> MOD_RES
 <222> (17)
 <223> Ala or Glu

<220>
 <221> MOD_RES
 <222> (19)
 <223> Ala or Val

<220>
 <221> MOD_RES
 <222> (20)
 <223> Ala or Arg

<220>
 <221> MOD_RES
 <222> (21)..(22)
 <223> Ala, Leu, Lys-NH(epsilon)-Lys, or Lys-NH(epsilon)-Arg; this range may encompass 1-2 residues according to the specification as filed; see specification for detailed description of preferred embodiments

<220>
 <221> MOD_RES
 <222> (23)
 <223> Phe, Tyr or naphthylalanine

<220>
 <221> MOD_RES
 <222> (24)
 <223> Ile, Val, Leu, pentylglycine, tert-butylglycine or Met

<220>
 <221> MOD_RES
 <222> (25)
 <223> Ala, Glu or Asp

<220>
 <221> MOD_RES
 <222> (26)
 <223> Ala, Trp, Phe, Tyr or naphthylalanine

<220>
 <221> MOD_RES
 <222> (27)
 <223> Ala or Leu

<220>
 <221> MOD_RES
 <222> (28)..(30)
 <223> Lys-Asn, Asn-Lys, Lys-NH(epsilon)-Lys-Asn, Lys-NH(epsilon)-Arg-Asn, Asn-Lys-NH(epsilon)-Lys, Asn-Lys-NH(epsilon)-Arg,

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Lys-NH(epsilon)-Lys-Ala, Lys-NH(epsilon)-Arg-Ala,
Ala-Lys-NH(epsilon)-Lys, or Ala-Lys-NH(epsilon)-Arg

<220>

<223> this range may encompass 2-3 residues according
to the specification as filed; see specification for
detailed description of preferred embodiments

<220>

<221> MOD_RES

<222> (33)

<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline, N-alkylglycine,
N-alkylpentylglycine and N-alkylalanine

<220>

<221> MOD_RES

<222> (38)..(40)

<223> Pro, homoproline, 3Hyp, 4Hyp, thioproline, N-alkylglycine,
N-alkylpentylglycine and N-alkylalanine

<220>

<221> MOD_RES

<222> (41)

<223> Ser or Tyr

<220>

<223> provided that no more than three of Xaa3, Xaa4, Xaa5, Xaa6,
Xaa8, Xaa9, Xaa10, Xaa11, Xaa12, Xaa13, Xaa14, Xaa15,
Xaa16, Xaa17, Xaa19, Xaa20, Xaa21, Xaa24, Xaa25, Xaa26
are Ala

<220>

<223> provided also that, if Xaa1 is His, Arg, Tyr or
4-imidazopropionyl then at least one of Xaa3, Xaa4 and
Xaa9 is Ala

<220>

<223> this peptide may encompass 28-41 residues, wherein residues
1-20 are constant and residues 21-41 may vary in length
according to the specification as filed; see specification for
detailed description of substitutions and preferred embodiments

<400> 94

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10 15

Xaa Ala Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gly
20 25 30

Xaa Ser Ser Gly Ala Xaa Xaa Xaa Xaa
35 40

<210> 95
 <211> 27
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Exendin agonist

<220>
 <223> c-term amidation

<220>
 <221> MOD_RES
 <222> (1)
 <223> 4-imidazolylpropionyl-Gly

<220>
 <221> MOD_RES
 <222> (26)
 <223> Lys-NH(epsilon)octanoyl

<400> 95
 Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu Glu
 1 5 10 15

Ala Val Arg Leu Phe Ile Glu Trp Leu Xaa Asn
 20 25

<210> 96
 <211> 27
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Exendin agonist

<220>
 <223> c-term amidation

<220>
 <221> MOD_RES
 <222> (1)
 <223> 4-imidazolylpropionyl-Gly

<220>
 <221> MOD_RES
 <222> (26)
 <223> Lys-NH(epsilon)octanoyl

<400> 96

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Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu Glu
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Phe Leu Xaa Asn
20 25

<210> 97
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)
<223> 4-imidazolylpropionyl-Gly

<220>
<221> MOD_RES
<222> (26)
<223> Lys-NH(epsilon)octanoyl

<400> 97
Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu Glu
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Trp Leu Xaa Asn Gly Gly
20 25

<210> 98
<211> 29
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Exendin agonist

<220>
<223> c-term amidation

<220>
<221> MOD_RES
<222> (1)
<223> 4-imidazolylpropionyl-Gly

<220>

<221> MOD_RES

<222> (26)

<223> Lys-NH(epsilon)octanoyl

<400> 98

Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu Glu
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Phe Leu Xaa Asn Gly Gly
20 25

<210> 99

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<220>

<221> MOD_RES

<222> (1)

<223> 4-imidazolylpropionyl-Gly

<220>

<221> MOD_RES

<222> (27)

<223> Lys-NH(epsilon)octanoyl

<400> 99

Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Met Glu Glu Glu
1 5 10 15

Ala Val Arg Leu Phe Ile Glu Trp Leu Asn Xaa
20 25

<210> 100

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Exendin agonist

<220>

<223> c-term amidation

<220>
 <221> MOD_RES
 <222> (1)
 <223> 4-imidazolylpropionyl-Gly

<220>
 <221> MOD_RES
 <222> (27)
 <223> Lys-NH(epsilon)octanoyl

<400> 100
 Xaa Glu Gly Thr Phe Thr Ser Ala Leu Ser Lys Gln Leu Glu Glu Glu
 1 5 10 15
 Ala Val Arg Leu Phe Ile Glu Phe Leu Asn Xaa
 20 25

<210> 101
 <211> 29
 <212> PRT
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<220>
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